



STIC Search Report

EIC 2800

STIC Database Tracking Number: 152022

TO: Joseph Nguyen
Location: JEF-6D60
Art Unit : 2815
Tuesday, May 17, 2005

Case Serial Number: 10/799,471

From: Jeff Harrison
Location: EIC 2800
JEF-4B68
Phone: 22511

Search Notes

Re: Zn-In-O material in channel contacting the source electrode and drain electrode

Please find attached the search history and the edited search results from Chemical Abstracts and INSPEC.

I found Zn-In-O as conductive material in semiconductor devices, but I'm not sure I found it used in channel.

I recommend that you browse the tagged items and the other attached results.

If you would like more searching on this case, or if you have questions or comments, please let me know.

Respectfully,
Jeff Harrison

L35 ANSWER 42 OF 42 HCAPLUS COPYRIGHT ACS on STN

AN 1997:79955 HCAPLUS

DN 126:96697

ED Entered STN: 03 Feb 1997

TI Electroluminescent material having **semiconductor**-dispersed
electric conductor structure, its manufacture, and light-emitting
device using it

IN Matsuoka, Jun; Kama, Kanichi; Nasu, Hiroyuki

PA Shingijutsu Kaihatsu Jigyodan, Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08306485	A2	19961122	JP 1995-109207	19950508
PRAI	JP 1995-109207		19950508		

AB The material comprises a transparent elec. conductive matrix in which
.ltoreq.0.1-.mu.m **semiconductor** fine particles are dispersed.
The **semiconductor** fine particles may be sulfides, selenides,
tellurides, nitrides, arsenides, antimonides, carbides, chlorides,
bromides, and/or iodides of Cd, Zn, Hg, Pb, Sn, In, Sb, As, Si, Ga, Al,
and/or Bi; S, Se, Te, Si, or Ge; or their compds. or solid. solns. The
elec. conductor may be oxides of In, Sn, Zn, W, Ti, Sb, Al, Mg, Ga, Ir,
and/or Pb, sulfides or selenides of Ba, As, Sb, Ge, Si, and/or P; ITO, Cd
Sn oxide, Cd Pb oxide, In Mg oxide, In Zn oxide, or ZnS; or their compds.
or solid solns. The material is manufd. by simultaneous or alternate
vapor deposition of **semiconductor** fine particles and a
transparent elec. conductor. The device comprises the above
material, electrodes at the both side of the material, and elec.
power source so as to apply .gtoreq.10 V to the electrodes. The
material is manufd. in simple processes at low cost.

IT 1312-43-2P, Indium oxide 1314-13-2P, Zinc oxide, uses
117944-65-7P, Indium zinc oxide

RL: DEV (Device component use); IMF (Industrial manufacture); PREP
(Preparation); USES (Uses)
(electroluminescent material having **semiconductor**-dispersed
elec. conductor structure and its manuf.)

RN 1312-43-2 HCAPLUS

CN Indium oxide (In2O3) (6CI, 8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1314-13-2 HCAPLUS

CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)

O== Zn

RN 117944-65-7 HCAPLUS

CN Indium zinc oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
In	x	7440-74-6
Zn	x	7440-66-6

L35 ANSWER 31 OF 42 HCAPLUS COPYRIGHT ACS on STN

AN 2001:847614 HCAPLUS
 DN 135:378843
 ED Entered STN: 22 Nov 2001
 TI Liquid **crystal** displays having improved **electrodes** in
 TFT structure
 IN Inoue, Kazuyoshi; Unakami, Akira; Matsuzaki, Shigeo
 PA Idemitsu Kosan Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G02F001-1368
 ICS G09F009-30; H01L029-786
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 56, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001324724	A2	20011122	JP 2000-142768	20000516
PRAI	JP 2000-142768		20000516		

AB The displays have **gate electrodes** and **source**
-drain electrodes made of alloys which contain 95-99.8
 at.% Al and 0.2-5 at.% Ir, Pd, and/or Pt and have work function measured
 by UPS .gtoreq.5.0 eV. The thin **electrodes** have stable
 resistivity even in **contact** with **pixel electrodes** of
 transparent metal oxide **electrodes**.

IT 1312-43-2, Indium oxide 1314-13-2, Zinc oxide, uses
 (pixel **electrode** component; liq. **crystal** displays
 using **gate electrodes** and **source-**
drain electrodes made of Al-Ir, Pd, and/or Pt alloys)

RN 1312-43-2 HCAPLUS

CN Indium oxide (In2O3) (6CI, 8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1314-13-2 HCAPLUS

CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)

O==Zn

IT 117944-65-7P, Indium zinc oxide
 (pixel **electrode**; liq. **crystal** displays using
gate electrodes and **source-drain**
electrodes made of Al-Ir, Pd, and/or Pt alloys)

RN 117944-65-7 HCAPLUS

CN Indium zinc oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
In	x	7440-74-6
Zn	x	7440-66-6

L12 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:836998 HCAPLUS

DN 134:11552

ED Entered STN: 30 Nov 2000

TI TFT (thin film transistor) panel, and its use in LCD (liquid crystal display)

IN Sai, Motonari; Jo, Keitetsu; Sasaki, Makoto; Arai, Kazuyuki

PA Frontec K. K., Japan

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000330134	A2	20001130	JP 2000-13500	20000121
	US 6649936	B1	20031118	US 2000-526150	20000315
	US 2003164498	A1	20030904	US 2003-385377	20030307
	US 6852998	B2	20050208		
PRAI	JP 1999-71037	A	19990316		
	JP 2000-13500	A	20000121		
	US 2000-526150	A1	20000315		

AB A source terminal, a gate terminal, and a picture element electrode which are made of ITZO (indium tin zinc oxide) or IZO (indium zinc oxide) are resp. connected with the source, gate, and drain of a TFT formed on a TFT panel. The drain/source of the TFT are soaked in an etchant which is used for etching the picture element electrode when a picture element electrode is patterned, but the source/drain are not etched because HNO₃, HCl, etc., which does not etch the source/drain is used as the etchant. It is not necessary to form a passivation layer between the picture element electrode and the source/drain to protect the source/drain.

IT 117944-65-7, Indium zinc oxide

RL: DEV (Device component use); USES (Uses)

(thin film transistor panel using ITZO or IZO source terminal, gate terminal, and picture element electrode for liq. crystal display)

RN 117944-65-7 HCAPLUS

CN Indium zinc oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
O	x	17778-80-2
In	x	7440-74-6
Zn	x	7440-66-6